NOTES ON SOME NEW FORAMINIFERA FROM THE NUMMULITIC FORMATION OF FLORIDA.

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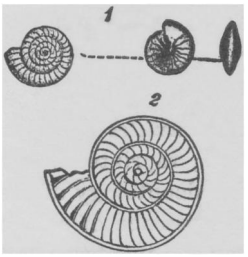
Since the publication of my paper on *Nummulites Willcoxi* Heilprin (Proc. Acad. Nat. Sciences, July, 1882; reprinted in my "Contributions to the Tertiary Geology and Paleontology of the United States," Phila., 1884), in which the existence of a true Nummulite in the rocks of the North American continent was first indicated, I have had the good fortune to have passed under my supervision an extensive series of the Florida nummulitic rock. In these, for which I am indebted to the kindness of Mr. Joseph Willcox of this city, I have detected a considerable number of foraminiferal forms which have not hitherto been recognized, I believe, as occurring in the United States Tertiaries, but which are usually present in larger or smaller quantities wherever the nummulitic formation is largely developed. Among these, as coming from Hernando County, are the genera *Heterostegina*. *Sphæroidina*, *Biloculina* (?), *Triloculina*, *Quinqueloculina*, and *Spiroloculina*. The genus *Orbitoides* is very abundantly represented in two or more species, one of which, unmistakably the *O. ephippium* (*O. sella*), so distinctive of the Oligocene portion of the European *Terrain nummulitique*, appears pre-eminent for its large size. The great development of this species, irrespective of all other evidence, would almost be sufficient by itself to determine the age (Oligocene) of the rock formation in which it occurs.

Associated with these forms are very considerable numbers of the *Nummulites Willcoxi*, and also a second species of the same genus of very much larger size. In it the whorls expand very rapidly in size, and the septa, in addition to being comparatively more numerous, are considerably more flexed than in the commoner species. The test measures between one-third and one-half of an inch in diameter. I propose naming this species *Nummulites Floridensis*, although I am by no means satisfied that it may not prove to be identical with one of the many closely related forms that have

Nummulites Floridensis.

been described from the south of Europe, the West India Islands, and elsewhere. Only an actual comparison of specimens can, in most instances, determine specific identity or variation in the case of this most difficult group of organisms. Pending the interval which must of necessity intervene before such comparison can be made, I have deemed it the safer plan to describe and name the species, subject to revision.



Nummnlites Willcoxi.
1. Natural size; 2. Enlarged.

A new locality for *Nummulites Willcoxi* has been found by Mr. Willcox, situated some fifteen miles to the northeast of the locality on the Cheeshowiska River, whence the species was originally obtained. Here the rock masses containing the fossils lie *in situ*, and at an elevation of not less than 150 feet above the sea. The existence of a true nummulitic basement formation in the State of Florida is thus placed beyond question, and, doubtless, the same will be found to have a very considerable extension inward.

No specimens of the *Operculina rotella* (= *Operculina complanata*?) have been detected in this newer series of rock fragments.